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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,431	10/18/2005	Yusuke Takahashi	19254	3768

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EXAMINER	
DANIELS, ANTHONY J	
ART UNIT	PAPER NUMBER
2622	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/553,431	TAKAHASHI ET AL.	
	Examiner	Art Unit	
	ANTHONY J. DANIELS	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2005*.

2a)☐ This action is FINAL. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 30-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 30-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 October 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The claimed "computer readable medium" of claims 36-41 lacks antecedent basis in the original filed specification.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claims 30-35 are rejected under 35 U.S.C. 101 because the steps of method claims 30 and 32 are not tied a particular apparatus. The USPTO recognizes such claims as being non-statutory subject matter. In the present instance, claim 30 recites the steps:

"…determining a candidate for an object which may possibly be present in a captured video image and a range of a captured video image to search for the candidate for the object, from positional information which is information of a position of an object and image capturing information including information for determining an area where an image will be captured; and recognizing whether the object of said candidate is present in said captured video image in said

range or not, using visual feature information which is visual feature information of said candidate for the object."

Claim 32 recites the steps:

"…estimating a position of an object in a captured video image from positional information which is information of the position of an object and image capturing information including information for determining an area where an image will be captured; and recognizing whether said object is present or not using a difference between visual feature quantities of a partial video image of said captured video image and said object and a difference between the position of said partial video image and said estimated position."

Considering claim 30, it is conceivable that a human being could observe a captured video image and recognize whether a particular object is present based on a size or color of the object (visual feature information). Considering claim 32, it is conceivable that a human being could determine a position of an object by an ordinary measurement means in a captured image. Furthermore, an object can be recognized in an image by viewing the actual object and an image which might include the object. Claims 31 and 33-35 are rejected as being dependent upon claims 30 and 32, respectively.

2. The claimed invention is directed to non-statutory subject matter. Claim 36-41 sets forth a "computer readable recording medium." However, the specification as originally filed makes no mention of a computer readable medium, and is also silent as to what elements are considered

to be encompassed by a computer readable medium. Since the specification as originally filed provides no definition of what encompasses the claimed computer readable medium, the examiner maintains that the claimed computer readable medium encompasses both statutory subject matter (e.g. CD-ROM, DVD-R, etc.) as well as non-statutory subject matter (e.g. signal or carrier wave), thereby necessitating this rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 36-41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The terms “computer-readable recording medium” are not supported by the specification filed 10/18/2005. The specification does support, "a recording medium such as a CD-ROM, a DVR-R, a hard disk, a memory, or the like”. While these media can be considered computer readable recording media, the USPTO recognizes that a claim filed after original submission is not granted breadth such that media other than those recited in specification are covered by that claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-6 and 30-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsumura et al. (US # 6,222,583).

As to claim 1, Matsumura et al. teaches a video image object recognizing apparatus (Figure 1) for determining a candidate for an object which may possibly be present in a captured video image (Figure 10, sub-domains) and a range of a captured video image to search for the candidate for the object (Figure 9, the range is the boundaries of the sub-domains), from positional information which is information of a position of an object (Figure 4, longitude and latitude information) and image capturing information including information for determining an area where an image will be captured (Figure 10, camera angle), and recognizing whether the object of said candidate is present in said captured video image in said range or not (Col. 13, Lines 32-42), using visual feature information which is visual feature information of said candidate for the object (Col. 13, Lines 32-42, coordinate values for each pixel are the visual feature information).

As to claim 2, Matsumura et al. teaches a video image object recognizing apparatus according to claim 1, wherein said range is determined using at least one of the position, a size, and an image capturing position of said candidate for the object in said captured video image, and a distance between the positions of said objects (Col. 11, Lines 1-8).

As to claim 3, Matsumura et al. teaches a video image object recognizing apparatus (Figure 1) for estimating a position of an object in a captured video image from positional information which is information of the position of an object and image capturing information including information for determining an area where an image will be captured (Figure 10, CG image), and recognizing whether said object is present or not using a difference between visual feature quantities of a partial video image of said captured video image and said object and a difference between the position of said partial video image and said estimated position (Col. 13, Lines 32-42).

As to claim 4, Matsumura et al. teaches a video image object recognizing apparatus according to claim 3, wherein a probability distribution of an error of said image capturing information is reflected in a probability distribution that an object is present in recognizing whether said object is present or not (*The probability distribution of an error in the image capturing information is interpreted to be 0% - 100%. Also, the probability distribution that an object is present is 0% - 100%. Thus, the probability distribution of the error is reflected (i.e. the same as) in the probability distribution that an object is present.*).

As to claim 5, Matsumura et al. teaches a video image object recognizing apparatus according to claim 4, wherein the probability distribution that an object is present is employed as the difference between the position of said partial video image and said estimated position (*The examiner submits that the difference between the position of said partial video image and said estimated position would inherently involve a probability distribution.*).

As to claim 6, Matsumura et al. teaches a video image object recognizing apparatus according to claim 5, wherein a normal distribution of a variance of an error of said image

capturing information is employed as said probability distribution (*Similar to claim 5, a probability distribution would inherently involve a normal distribution of a variance of the error.*).

As to claims 30-35, claims 30-35 are method claims corresponding to the apparatus claims 1-5, respectively. Therefore, claims 30-35 are analyzed and rejected as previously discussed with respect to claims 1-6, respectively.

As to claims 36-41, in light of the passages of Matsumura et al. discussing computer generation ("CG") and the cited passages of Matsumura et al. discussed in claims 1-6, claims 36-41 are analyzed and rejected as previously discussed in claims 1-6, respectively.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J. DANIELS whose telephone number is (571)272-7362. The examiner can normally be reached on 8:00 A.M. - 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AD
2/16/2009

/Sinh N Tran/
Supervisory Patent Examiner, Art Unit 2622